

Programme

SESSION ONE

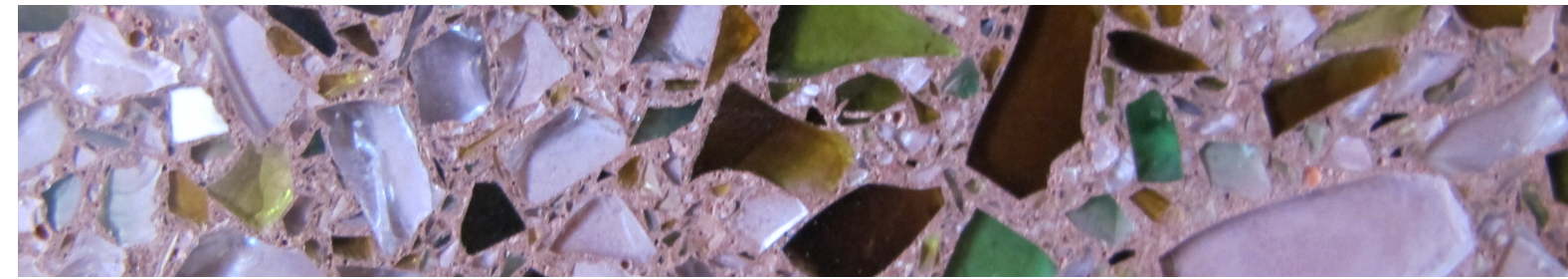
Future issues for the construction industry

- 0930** **Registration and refreshments**
- 1000** **Welcome and Introduction**
Lori McElroy, Director, Sust. Programme
Architecture and Design Scotland
- 1015** **Setting the Scene**
Gary Newman, Executive Chair,
Alliance for Sustainable Building
Products (ASBP)
- 1035** **Natural, Ecological and Renewable
Materials**
Prof. Tom Woolley, Architect and
Environmental Consultant, Rachel
Bevan Architects
- The relevance of these materials to
new build and renovation
 - Sourcing, availability, specification
and detailing issues
 - The reason for using such materials,
selection and certification
- 1055** **Break**
- 1115** **Embodied Impact: Measuring,
benchmarking, and target setting**
Craig Jones, Director, Circular Ecology
- The ICE database: future development
 - Measuring and reducing embodied
carbon
 - Water footprinting materials and
industrial products
- 1135** **Materials and Future use - Scottish
context**
Richard Atkins, Director Thirdwave/ GCU
- Encouraging appropriate choice
 - Scottish context of materials and
future use
 - Case Study - The Tree Centre
- 1155** **Discussion**
Chair - Gary Newman ASPB
- 1225** **NEES project update**
Keith Baker, Glasgow Caledonian
University
- 1230** **Lunch**

SESSION TWO

Future materials resource efficiency outlook

- 1330** **Wood**
David Hopkins, Communications
Manager, Wood For Good
- 1345** **Stone, Lime and Earth Construction**
Roger Curtis, Technical Research
Manager, Historic Scotland
- 1400** **Metals**
John Dowling, Sustainability Manager,
British Constructional Steelwork
Association
- 1415** **Plastics**
Julian Richards, Director,
Milestone Kitchens
- 1430** **Break**
- 1500** **Composite Materials**
Sita Goudie, Manager, Enviroglass
- 1515** **Concrete and Minerals**
Robert Brown, Chairman,
The Concrete Society
- 1530** **Paints and Coatings**
Eric Wemyss, Operations Manager,
Castle Repaint
- 1545** **Textiles and Crops (raw and processed)**
Mark Lynn, Director, Thermafleece and
Alliance for Sustainable Building products
- 1600** **Debate: Panel and audience**
Chair - Prof. Rohinton Emmanuel,
Glasgow Caledonian University
- 1630** **Summary and next steps**
Gary Newman, ASPB
- 1645** **Networking**
- 1730** **Close**



Future Footprints

Building Products in a Resource Efficient World

26th November 2013, The Lighthouse, Glasgow



Information



Future Footprints Building Products in a Resource Efficient World 26th November 2013, The Lighthouse

The construction sector is the most significant consumer of the world's natural resources. Pressures of cost, availability and environmental impact on these resources is intensifying, and we will need to get 'more from less' if we are going to meet future construction needs. This seminar proposes that the industry will need to move away from commodified generic materials to a value added model, which encourages and rewards innovation and intelligent design for both resource efficiency and building performance. Currently there is a paucity of tools that encourage a resource efficient approach for the building frame. What tools should we be using? Will BIM support this? How can different resource groups and designers respond to this?



Addressing these issues our speakers will review

- What are the resource limits; UK and global outlook?
- What will the future balance of materials look like?
 - Volume
 - Value
 - Appropriate use
- What re-use options are available or likely to develop?
- Social and ethical considerations
- How can resource efficiency be measured and best practice encouraged?
- How will BIM and other tools help to encourage appropriate choice?
- Examples of current best practice



A significant debate will follow the formal presentations.

This event is inspired by Architecture and Design Scotland's MATERIAL CONSIDERATIONS: A Library of Sustainable Building Materials at The Lighthouse in Glasgow and the work of the Alliance for Sustainable Building Products. It is part of a seminar programme that has been designed to complement the exhibition CAST: Innovations in Concrete, which A+DS has curated in association with the Concrete Society and ESALA.



Speakers



Lori McElroy, Sust. Programme Director, Architecture and Design Scotland

Dr Lori McElroy is an Environmental Engineer with a masters in Design Philosophy from Glasgow School of Art and a PhD in Mechanical

Engineering from the University of Strathclyde. She has spent the last 25 years working in practice and research, has acted as principal investigator on numerous European and Scottish Government funded research projects and has published extensively on sustainability, energy and environmental issues in the built environment. Her recent work is focused on raising awareness, knowledge transfer and capacity building in order to improve the quality and performance of the built environment, achieved through the provision of support and advice to the construction industry and its clients. Projects include the acclaimed DTi funded Energy Design Advice Scheme, and the Scottish Executive and ERDF funded Scottish energy Systems Group. Lori now directs the Sust. Programme for Architecture and Design Scotland, based at The Lighthouse in Glasgow.



Gary Newman, Executive Chair, Alliance for Sustainable Building Products

Gary is a construction engineer by training and early career. After completing a wood science masters, Gary became inspired by the technical potential of natural construction

products, and now has over 15 years experience in the development, manufacturing and marketing of natural fibre geotextiles and natural insulation products. Gary is Director of Plant Fibre Technology Ltd, a company focused on the technical development of bio-based materials.



Prof. Tom Woolley, Architect and Environmental Consultant, Rachel Bevan Architects

Tom Woolley B.Arch, PhD is an architect and environmental researcher living in County Down Northern Ireland. He was Professor of Architecture

at Queens University Belfast from 1991 to 2007 but now works as a freelance educator and environmental consultant for Rachel Bevan Architects and is currently a Visiting Professor at the University of Central Lancashire. He is also working on an EU Research project with University of Ulster. He has been Visiting Professor of Architecture at the Centre for Alternative Technology Graduate School of the Environment in Wales, and also Professor of Sustainable Rural Architecture at the Countryside and Communities Research Institute, University of Gloucestershire. Tom is the UK representative on the international board of ARC-PEACE, a UN accredited organisation and is a member of the National Committee of Scientists for Global Responsibility.

His principle research work has been on sustainable and renewable bio-based construction materials including strawbale and hemp lime construction. Research projects have been funded under EU programmes, the Technology Strategy Board, Energy Saving Trust, the Irish EPA and the Creative Industries Innovation Fund.

Tom Woolley has published widely on community participation, housing and green architecture. He was editor of the Green Building Handbook and author of Natural Building (Crowood Press) and Hemp and Lime Construction (BRE/IHS Press). He is one of the founder members of the Alliance for Sustainable Building Products, UK, EASCA and the Living Building Institute in Ireland. A new 226 page book, Low Impact Building, was published by Wiley Blackwell in February 2013

Speakers



Dr. Craig Jones, Director, Circular Ecology

Circular Ecology are a resource efficiency, life cycle assessment (LCA) and footprinting experts. He is best known as the author of the Inventory of Carbon & Energy (ICE) database from the University of Bath – an

embodied energy and carbon database for building materials that has been downloaded by over 15,000 people from around the world. He provided the data to carbon footprint the construction of the London 2012 Olympics and tailored an embodied energy and carbon database for the \$22 billion Masdar city in Abu Dhabi, which aspires to be the first zero carbon, zero waste and car free city. Craig wrote the first book dedicated to embodied carbon in construction and gained his PhD by the rare route of publication, which involved publishing 9 academic articles on the topic of embodied carbon and life cycle assessment. Craig has also been working on the development of an embodied water database for materials, with the help of a Technology Strategy Board (TSB) grant.



Richard Atkins, Architect / Director, Thirdwave/ GCU

Richard Atkins studied Architecture at the University of the South Bank and the University of Edinburgh, qualifying in 1989. Richard established his practice in April 2000, specifically to

concentrate on three main interests: Producing buildings, which minimise their detrimental environmental impact, both during construction and in use; the reinterpretation and conservation of historic buildings; and working with community groups. The key aim of the practice is to provide clients with a building design service, rooted in an understanding of their needs and responding to them. Richard is a sole practitioner and: holds an Advanced Accredited in Sustainability by the Royal Incorporation of Architects in Scotland (RIAS); is a member of RIAS Council, EHTP and Chair of Sustainability Task Group; is a past Chair Scottish Ecological Design Association; is a member of Section 6 (Building Standards Division of the Scottish Government) - Working Group;

is a member of the Parliamentary Cross Party Group on the Built Environment; is a member of SenSCOT; and is Scotland's first Approved Certifier of Design (Section 6 – Energy) Domestic. Richard is also Managing Director of Home Energy and Data Services Limited and is currently completing a PhD in the Sustainable Assessment of the Built Environment at Glasgow Caledonian University.



Keith Baker, Research Associate, Glasgow Caledonian University

Dr Keith Baker a Research Associate on the NEES project with the Sustainable Urban Environments Research Group at Glasgow Caledonian University and a founder

member of the Initiative for Carbon Accounting (ICARB). He has a PhD in Domestic Energy Consumption and a background in carbon accounting and science and technology policy.



David Hopkins, Communications Manager, Wood for Good.

David Hopkins is also Head of External Affairs at the Timber Trade Federation. Wood for good is the industry sustainability and promotion campaign. A former journalist,

he switched to corporate advisory services and has a strong background in integrating sustainability and communications strategies, was a founding director of award winning consultancy Carbon International and has advised clients ranging from blue-chip utilities to start-up technology firms, including the London Stock Exchange, Low Carbon Accelerator, Good Energy and Associated British Foods.

Speakers



Roger Curtis, Technical Research Manager, Historic Scotland Conservation Group

After military service he joined the conservation contractors Cumming & Co, based in Perth, where he managed a range of sites in Scotland, with additional responsibility for Health &

Safety. During this time he completed an MSc in Building Conservation at Heriot Watt University in Edinburgh. Work with the company ranged from castle consolidation and restoration to upgrading of domestic buildings, churches and civil structures with a focus on mass masonry structural joinery and limeworks. He joined Historic Scotland in February 2006 and is presently the Technical Research Manager, looking after a diverse mix of research strands that include energy efficiency in traditional buildings, properties and behaviours of traditional materials. Focus on practical site trials and evaluation has been ongoing since 2007, with an emphasis on appropriate solutions for traditionally built structures of all sizes and type.

This work has now expanded into wider participation with European wide research partners and he is the UK rep on the European Standard on energy efficiency in historic buildings.



John Dowling, Sustainability Manager, British Constructional Steelwork Association

He is a Chartered member of the Institution of Mechanical Engineers and a graduate of the Universities of Limerick and Strathclyde. He worked

for a number of years in marine, offshore and engineering consultancy before joining the steel construction sector. He has been a part of the team that has been responsible for raising the market share for steel frames in multi-storey, non-residential construction from 25% to 70% over the past 30 years. He has worked across a number of disciplines, including acoustics, vibration and education but his specialist areas are fire and sustainable construction. For the past fifteen years, he has led the UK steel construction sector's response to the increasing demands for more sustainable construction.



Julian Richards, Director, Milestone Kitchens

We Started our business in 1988 after spending 10 years as a Service & Commissioning Engineer for a major food freezing machinery company. HND qualified engineer needing a career change and chose

kitchens, started with replacement kitchen doors and built up to full kitchen projects. A few years later added bedrooms and bathrooms into the mix and in 2005 started to look seriously at the waste in our industry. This provoked a need to try and develop the first truly recycled content kitchen made in the UK. After a year of searching for materials, our original KORC (Kitchen Of Recycled Content) kitchen was born using primarily recycled plastics for the worktops and doors.

Since then we now have a range of 6 recycled content kitchens available, using a variety of materials and we believe we are the only company in the UK to offer this.

The search for new materials is constant and we need to do much more in this country to take this seriously. We've proved there's a market, it just needs growing.



Sita Goudie, Manager, Enviroglass

Sita is the Environmental Improvement Officer at the Shetland Amenity Trust. As part of her role she manages Enviroglass, a social enterprise which was established to find a financially viable recycling

route for Shetland's waste glass. The innovative glasscast products they developed have been used in a range of projects throughout the UK.

Speakers



**Robert Brown, Chairman,
The Concrete Society**

I have been involved with the technical side of concrete for the past 32 years since joining Tilcon at Alexandra Parade in Glasgow in 1981. I have my diploma in Advanced Concrete Technology and gained a wealth

of practical knowledge over the last 32 years in the industry within the Aggregate and Ready Mixed Concrete.

I am currently developing new ranges of products designed to provide solutions for customers, as part of my new role with Hope Construction Materials. I am Chairman of "The Concrete Society Scotland Region" and Chairman of the Institute of Concrete Technology in Scotland. Using my role in both organisations to promote the correct use of concrete and to educate the younger generation coming into the industry.



**Eric Wemyss, Operations
Manager, Castle Repaint**

Castle Enterprises is a registered charity whose mission is to promote the welfare of people with mental health illness and to relieve poverty and distress among residents of Fife. To meet those objectives the

charity has a number of projects, from recycling furniture to producing "paint from paint". By undertaking these initiatives the charity is able to redistribute useable household goods to people in need of help, whilst reducing landfill waste.

Eric spent 30 years working with the Thorn EMI (Europe) Group, managing a network of consumer electrical stores, customer service centres and logistics across the UK. Eric held the position of Director of Service for the Brighthouse Group and spent some time in the Banking sector. Eric was a past member of "Scottish Business in the Community". He recently came out of retirement to join Castle Enterprises in their Repaint production operation.



**Mark Lynn, Director,
Thermafleece and Alliance for
Sustainable Building Products**

Mark Lynn is Managing Director of Cumbria based ERI Ltd (best known for their Thermafleece insulation) as well as being a Director of the Alliance for Sustainable Building Products

(ASBP). Mark has 20 years' experience in the field of natural building materials and has spent much of the last decade taking new products to market and building small businesses. He is passionate about ensuring that sustainability, performance and quality go hand in hand. Previously Mark worked internationally in both technical and commercial roles for Rentokil Timber Preserving as well as running his own management consultancy business.



**Prof. Rohinton Emmanuel,
Glasgow Caledonian
University**

Rohinton Emmanuel, Architect, is a Professor and Subject Group Leader in Sustainable Design and Construction at Glasgow Caledonian University, where he also directs its joint-re-

search group on Sustainable Urban Environments. With over twenty years of research and consultancy expertise, he pioneered the inquiry of urban climate change in warm regions and has taught and consulted on climate and environment sensitive design, building and urban sustainability and its assessment, building energy efficiency, thermal comfort and carbon in the built environment. He has worked with government and NGOs on Scotland's low carbon built environment policies and proposals. Rohinton is the Secretary for the International Association for Urban Climate and was a member of the Expert Team on Urban and Building Climatology (ET 4.4) of the World Meteorological Organization (WMO) as well as the CIB Working Group (W108) on "Buildings and Climate Change." He has also worked as a green building consultant (LEED certification) and has authored over 150 research publications, including An Urban Approach to Climate Sensitive Design: Strategies for the Tropics (Taylor & Francis, London, 2005) and Carbon Management in the Built Environment (Routledge, London, 2012).

Organisations



Architecture+DesignScotland
Aithearachd is Dealbhadh na h-Alba

Architecture and Design Scotland (A+DS) is Scotland's champion for architecture and the built environment.

An Executive Non Departmental Public Body (NDPB) of the Scottish Government, we support the creation of well-designed, sustainable buildings and places that provide our communities and our nation with the opportunities to flourish.

Architecture and Design Scotland's strategic objectives are to: Collaborate to achieve good architecture and sustainable places; Support and influence our partners to create the best buildings and places; and Inspire Scotland's people to value good architecture and sustainable places.

Architecture and Design Scotland

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The Alliance
for Sustainable
Building Products

The ASBP is a cross sector, not for profit organisation, comprising, building product manufacturers

and distributors, specifiers, designers, contractors, public interest and sustainability organisations, academics and other building practitioners.

We are committed to accelerating the transition to a high performance, healthy and low carbon built environment by championing the increased understanding and use of building products that meet demonstrably high standards of sustainability.

Please contact Simon Corbey on simon@asbp.org.uk or visit www.asbp.org.uk for more information on events, research and membership.



Glasgow Caledonian University (GCU) is a vibrant, innovative and multi-award winning university. Our focus on employability, leadership and responsibility enables our graduates to excel both locally and internationally.

Glasgow Caledonian University's Sustainable Urban Environments Research Group aims to inform policy and practice through research into the whole-life sustainability of built assets, from design to demolition and eventual re-use, and at scales ranging from individual buildings to neighbourhoods and cities.

NEES: The Natural Energy Efficiency in Sustainability research group at Glasgow Caledonian University (GCU), please contact Dr Keith Baker at keith.baker@gcu.ac.uk

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